US Army Corps of Engineers®
Memphis District

ISSUE DATE: 26 January 2004

NATIONAL ENVIRONMENTAL POLICY ACT SCOPING DOCUMENT AND PUBLIC MEETING ANNOUNCEMENT

Request for Comments
U.S. ARMY CORPS OF ENGINEERS

REPLY TO:
Attn: Danny Ward
Environmental Branch
U.S. ARMY CORPS OF ENGINEERS
167 North Main Street, Room B-202
Memphis, Tennessee 38103-1894
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TITLE: Millington and Vicinity, Tennessee

AUTHORITY:

The United States House of Representatives Committee on Transportation and Infrastructure adopted a resolution on March 7, 1996, authorizing that...

"The Secretary of the Army review the report of the Chief of Engineers on the Wolf River and Tributaries, Tennessee and Mississippi, published as House Document Numbered 76, Eighty-fifth Congress, and other pertinent reports, to determine whether any modifications of the recommendations contained therein are advisable at this time, with particular reference to the need for improvements for flood control, environmental restoration, water quality, and related purposes associated with storm water runoff and management in the metropolitan Memphis, Tennessee area and tributary basins including Shelby, Tipton, and Fayette Counties, Tennessee, and DeSoto and Marshall Counties, Mississippi. This area includes the Hatchie River, Loosahatchie River, Wolf River, Nonconnah Creek, Horn Lake Creek, and Coldwater River Basins. The review shall evaluate the effectiveness of existing Federal and non-Federal improvements, and determine the need for additional improvements to prevent flooding from storm water, to restore environmental resources, and to improve the quality of water entering the Mississippi River and its tributaries."

This congressional resolution initiated the Memphis Metro Reconnaissance Study, which was

completed in March 1999 and the Reconnaissance Report certified in April 2001. Because of the vast area and myriad of problems addressed in the resolution, the Memphis Metro Reconnaissance Study analyzed only five (5) areas in detail. The other areas within the previous study area, including the Big Creek drainage basin near Millington, Tennessee, were analyzed only for existing and future hydrology and hydraulics.

STUDY PURPOSE:

The Millington, Tennessee and Vicinity Feasibility Study will be conducted to analyze problems being experienced in the Big Creek drainage basin and evaluate alternatives to provide plans for flood and erosion control, environmental protection and restoration, improved water quality, and recreational quality of life features. During the feasibility study, a plan that reasonably maximizes the net economic development benefits, consistent with the Federal objective, will be formulated. This plan is identified as the National Economic Development (NED) Plan. Additionally, National Ecosystem Restoration (NER) benefits will be evaluated with respect to the net change in habitat quantity and/or quality and expressed quantitatively in physical units and indices, but not monetary units. The alternative that trades off NED and NER benefits to maximize the sum of the net contributions to NED and NER will become the Federally recommended (Combined NED/NER) plan.

DESCRIPTION OF STUDY AREA:

Big Creek, a tributary of the Loosahatchie River, is located north of the Loosahatchie River in Shelby and Tipton Counties, Tennessee. A vicinity map is enclosed. Big Creek begins its flow in Tipton County, Tennessee, just west of the city of Munford. From there, it flows southerly into Shelby County, Tennessee on the east side of the city of Millington. It then changes direction to the west, commingles with Crooked Creek, and flows westerly south of Millington to a point two miles west of Highway 51, where it changes direction again southwesterly, paralleling Highway 51, before discharging into the Loosahatchie River. The Big Creek drainage basin, including the tributaries of Crooked Creek, Casper Creek, North Fork Creek, Royster Creek, Jakes and Bear Creeks, and Lateral A, covers an area of 154 square miles.

Flood Damage Reduction

Severe flooding occurred in the Big Creek drainage basin in 1965, 1973, 1987, and 1988. The most devastating flood was in the City of Millington during December 1987, when severe damage occurred to infrastructure, businesses, private property, farmlands, and numerous vehicles and endangered life and limb of the over 2,000 residents that were evacuated. More than 600 structures, 500 private vehicles, and 70 school busses were flooded during that event. Total rainfall was 12.8 inches. While no casualties occurred, the potential is a very real consideration. The economic estimate for damages of that one event exceeded $11,000,000. (Source: Millington, Tennessee: Detailed Project Report – Section 205 of the 1948 Flood Control Act, as Amended, Dated January 1990).

In 1989, the Corps of Engineers conducted a study in response to the December 1987 flooding. As a result of that study, a levee was constructed approximately one mile along the right top bank

of Big Creek. This levee provides a level of protection against a 100-year frequency event, but would not totally prevent the damaging affects of the event of 1987.

Heavy rainfalls, totaling over 10 inches in November 2001, caused temporary road closures in the Big Creek drainage basin and a 21-foot rise and fall of the creek's water surface elevation within 48 hours. Estimates indicate that the rainfall event approximated a 50-year storm. Conditions would have been more severe if the water surface elevations on the Loosahatchie and Mississippi Rivers were higher during the storm event. This flash flood type scenario is not uncommon to the drainage basin, yet its impact eventually affects the overall stability of the drainage system and adjoining infrastructure.

Ecosystem Restoration and Protection

Habitat in Big Creek is limited due to severe channel alteration, headcutting, high urbanization rates, and an altered hydraulic regime. Most of the watershed has been cleared for agricultural or development purposes. Projections for the Loosahatchie River Basin from 1997 to 2050 expect a loss of 645 acres of bottomland hardwoods, 43 acres of forested swamp, 29 acres of marsh, and 185 acres of open water/impoundments. The amount of these overall numbers that is attributed to Big Creek is not known at this time, but it was noted that the majority of the losses are in Shelby County.

Stream Bank Stability and Erosion

Identified areas of severe erosion, as well as the greatest concentration of infrastructure susceptible to flood damages, exist near the City of Millington along the section of Big Creek. This reach is identified as the Big Creek Drainage Canal due to previous alterations of the natural stream. A levee protecting the City of Millington from flooding is located along the north bank of the channel along this reach. In the reaches where erosion exists, it has caused an increase in channel depth, bank failure, and channel widening.

Water Quality

Water quality, erosion, and environmental degradation are major problems in the study area. The 1998 Tennessee Rivers Assessment Project graded Big Creek Drainage Canal on 'Natural and Scenic Qualities' and on 'Water Quality.' It received a 'Not a Significant Resource', the lowest score possible, for 'Natural and Scenic Qualities' and a 'Partially Supporting Designated Use [as assigned to it by the Water Quality Control Board],' the second lowest score possible and the lowest score given to any tributary of the Loosahatchie River. The Loosahatchie River received a 'Does Not Support Designated Use' for water quality.

Big Creek, from its mouth to Crooked Creek, is listed on the Clean Water Act 303(d) list of impaired waterways by the Tennessee Department of Environment and Conservation (TDEC). TDEC determined that this waterway is a high priority for development of the Total Maximum Daily Load (TMDL). The identified water pollutants are organic enrichment/DO, siltation, nutrients, and pathogens. The sources of these water quality problems were identified as landfills, channelization, and agricultural and urban runoff.

Recreation

Limited recreational opportunities exist in the Big Creek watershed.

PRELIMINARY ALTERNATIVES

Alternatives that address the problems experienced in the watershed will be formulated and studied in detail. Several preliminary alternatives have already been identified. These preliminary alternatives are listed:

One alternative is to implement the Chickasaw Basin Authority's proposal to construct one or two large detention structures upstream of the areas currently identified as having the greatest problems. This proposal was studied by a contractor for the impact it would have on future flooding.

Another proposed alternative is the United States Department of Agriculture Natural Resource Conservation Service developed plan that utilizes smaller on-farm grade control structures, reforestation within riparian buffer strips, and downstream environmental enhancements. This plan identifies 51 sites for these smaller grade control structures within Shelby County, but has not yet analyzed Tipton County for sites.

Another alternative that is championed by one local interest includes widening the main channel of Big Creek and installing a system of weirs that will permanently pond water in the main channel, with an intent to contain potential floodwaters, arrest headcutting, stop bank erosion, provide environmental and water quality improvement, eliminate the requirements for periodic snagging, create fisheries and wildlife habitats and provide for a scenic basis for recreational and educational features. Projects similar to this proposal have been implemented in Scottsdale, Arizona, at Johnson Creek in Arlington, TX, and at Nine Mile Run (a CAP Section 206 project) in Pittsburgh, PA.

Other possible alternative plans would be considered in the feasibility phase. They would include combinations of structural and nonstructural measures to address existing problems and future water resource demands of the study area. Structural measures would include weir/grade control structures, environmental channel improvements, channel restoration, and detention structures. Non-structural measures include reforestation, riparian buffer zones, relocation of infrastructure, new land use practices, and development of a watershed management plan.

PUBLIC INTEREST REVIEW:

The purpose of this notice is to advise all interested parties of the proposed feasibility study and to solicit comments and information necessary to determine needs and opportunities, to develop alternatives that require study, and to evaluate the probable impact (including cumulative impacts) on endangered species, historic properties, water quality, and the public interest. Comments are used in plan formulation and the preparation of an Environmental Assessment pursuant to the National Environmental Policy Act. An Environmental Impact Statement would be prepared if it

is determined that there are significant impacts. This notice is being circulated to Federal, State, and local environmental agencies; Indian Tribes; and the general public.

A public information gathering meeting will be conducted on **Thursday, February 12, 2004, at the Baker Community Center, 7942 Church Street, in Millington, Tennessee, at 6:30.** Directions are enclosed. All interested parties are encouraged to attend.

COMMENTS OR REQUEST FOR ADDITIONAL INFORMATION:

If you wish to obtain additional information or to submit comments on this notice, please contact Danny Ward (daniel.d.ward@mvm02.usace.army.mil) at the U.S. Army Corps of Engineers, 167 North Main Street, RM B-202, Memphis, Tennessee 38103-1894, at 901/544-0709.

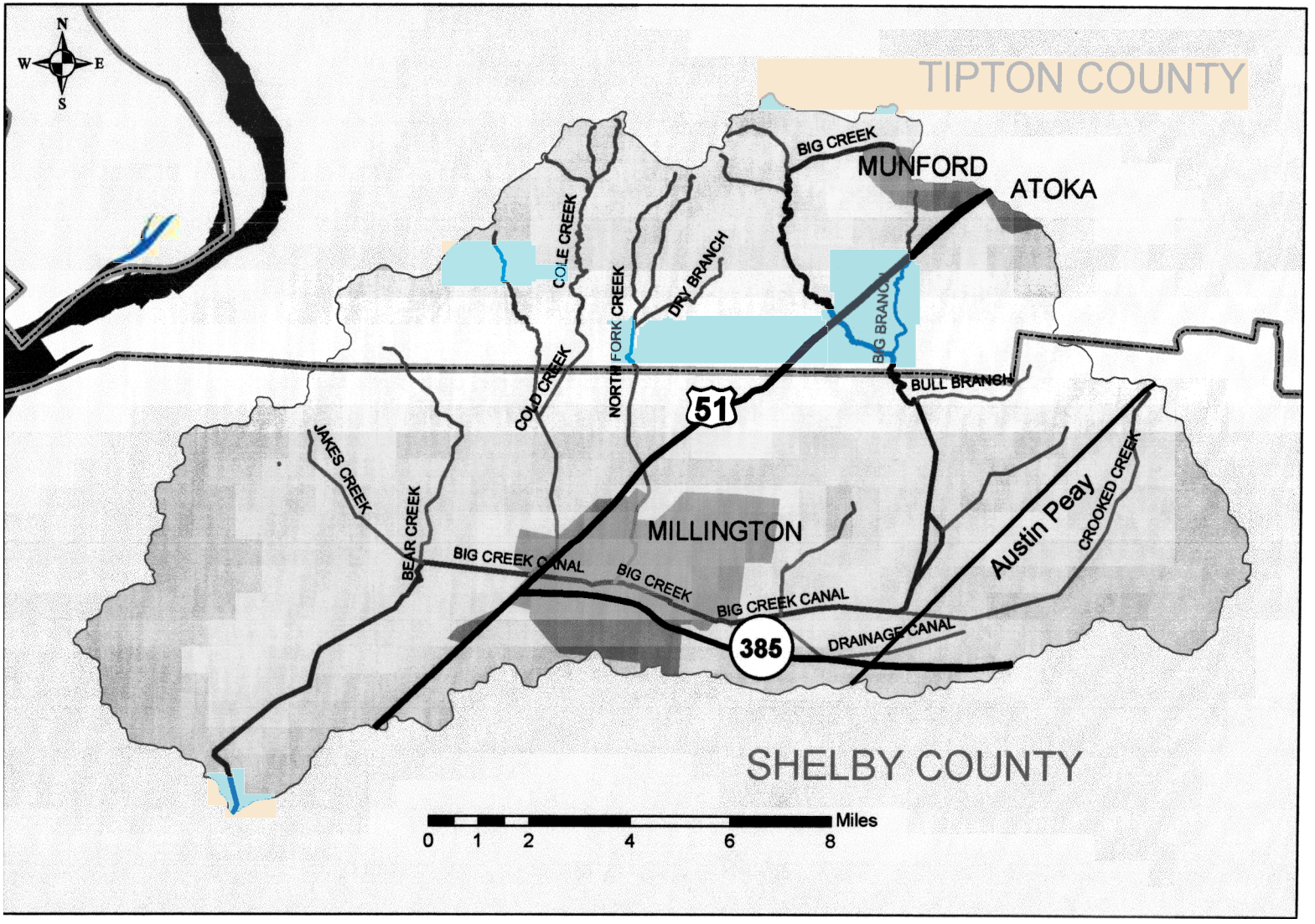
Comments should be forwarded to reach this office by March 1, 2004.

Sincerely,

David L. Reece
Chief, Environmental Branch

Enclosures

Big Creek Drainage Basin, Millington and Vicinity, Tennessee.



BAKER COMMUNITY CENTER, 7942 CHURCH STREET, MILLINGTON, TENNESSEE